

NEW EQUIPMENT & SYSTEM APPROVAL PROFORMA

Ref: 14/29123

Note: the prompts given below are only a guide to the information required for approval. Dependent on the type of equipment or system that requires approval delete any section that is not applicable or include additional information if necessary. **Mandatory** fields are marked with an asterisk (*).

1 Equipment or System to be approved *

SAFETRAX Temporary Handrail System

Supplied by: JTL Robertson Pty Ltd trading as SAFETRAX Manufactured by: SAFETRAX

2 Originator *

Name: John Lord, Team Manager Maitland Email: jlord@artc.com.au

Company: ARTC

ARTC Contact Person: John Lord

3 Introduction *

SAFETRAX temporary handrail systems purpose is to quickly erect a positive barrier keeping workers out of the exclusion zone whilst working on the side of railway track.

Malcolm Robertson (Designer) JTL ROBERTSON PTY LTD trading as SAFETRAX.



Figure 1 - The use of SAFETRAX Temporary Handrail System as a demarcation fence is a means to reduce risk and aid in the protection of workers from rail traffic.

4 Determination of Need *

SAFETRAX system provides a physical and visual safety barrier to separate people and danger whilst working next to live lines. This equipment uses the same principals as another temporary handrail system currently approved by ARTC, however this system has an alternative method of attachment to the rail.

Key benefits over existing systems:

- SAFETRAX's system does not require any ballast disturbance (digging) for its installation. The ballast does not need restoration and therefore requires no ballast tamping after removal.
- This system uses fibreglass post which is safer than steel.
- System is quicker than current approved systems to install and remove, increasing safety and productivity of workers.
- Attaches to the rail foot rather than the fasteners which eliminates issues related to the fence posts lining up with different sleeper spacings.
- Vertical post height can be adjusted to suit the environment.

5 Significant Change or Not (as determined by the Manager Standards) *

This change in equipment or system is assessed as SIGNIFICANT. Update to network wide applicability following initial trials in Maitland is assessed as MINOR.

6 Review Panel (as determined by the Manager Standards) *

- John Furness - Manager Standards
- John Lord – Team Manager Maitland

- Greg Watson – National Rules Manager
- Denis Snowden – Work, Health & Safety Advisor, Hunter Valley
- Jess Tai – Track Engineer

7 Safety

The application of the SAFETRAX system is intended to be used as a visual warning barrier only and therefore applicable Safeworking/network rules and procedures still apply for working within the Danger Zone (3m from nearest rail, i.e. 3717.5 from track centreline.)

SAFETRAX Temporary Handrail System is manufactured using non-conductive fibre glass material and therefore has no potential to interfere with ARTC Signalling or track circuit infrastructure.

Complies with Australian Standard AS 4687 : Temporary Fencing and Hoardings.

8 Performance and Suitability

SAFE TRAX is an Australian system for providing a visual demarcation barrier fixed to live railway infrastructure. At no times will it encroach on Structure Gauge which in turn implies transit space for Plate F Wagons in accordance with HV Clearance Strategy 2008 Page 10 is also not breached.

ARTC ETM-07-01 Structure Gauge 1994 used as main document for this application.

Provided Risk Assessment gives details on how ARTC would manage the installation and ongoing inspection to ensure the fencing does not break the minimum Structure Gauge required by ETM-17-01.

It is proposed to install this barrier outside the kinematic envelope, along an offset exceeding 2060 from the centreline of track, with increased distances for curvature as ETM-07-01 requires. The Safetrax Barrier is a form of rigid demarcation fencing that provides a visual barrier within the standard 3.0m danger zone, but no less than 2060mm from the centre line and is adjustable to cater for a variety of structural clearances.

(i) Use in other rail networks

Queensland Rail – contact Marco Barrazo 0414 855 921

Sydney Trains (Formerly RailCorp) – Dorothy Koukari – 02 8922 1622 (type approval) Ref: BS-PA-13/12.

(ii) Use in the ARTC network

Similar products have previously been type approved for the ARTC network:

- Roop Smartfence Rail Safety Fencing. Ref: 09/27469
- Vortok Safety Barrier. Ref: 11/87895.

This product was approved in August 2014 for trials on the ARTC network in Maitland. Following successful trials, it is recommended for approval across the ARTC network (April 2015).

(iii) Issues arising from usage of the equipment/system

Suitable controls have being identified within the Risk Assessment to ensure risk is mitigated to So Far As Is Reasonably Practicable.

(iv) Changes required to infrastructure or systems for use of the equipment

No changes required to infrastructure as the barrier clips onto existing rails.

This system does not alter or replace the requirements for planning work within the Rail Corridor and assessing the work for safety. Any barrier is in addition to requirements within the Rules and Procedures and not a replacement.

9 Reliability

No reliability issues have been identified with the interface with signalling or infrastructure.

10 Maintainability

The light weight fencing is easily maintained with visual inspections occurring whilst in use daily; any defect equipment can easily be replaced. Field staff or contractors will remain responsible for ensuring the fencing is fit for purpose and is inspected / replaced as required. The design of the fencing will not restrict operational requirements and can be removed easily. Defected equipment can be easily replaced through Safetrax.

11 Approval *

SAFETRAX Temporary Handrail System is approved for installation as a temporary delineation fence on the ARTC network.

12 Is the supplier accredited to ISO 9001 specifically for this product? *

AS/NZS ISO 9001:2008 Certificate No. MEL4000385

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|-----|-------------------------------------|----|--------------------------|
| Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
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13 Conditions of Approval *

1. Installation and maintenance to be as per manufacturer's instructions.

2. Work Method Statement to be developed by ARTC, and installation instructions to be attached.
3. Safetrax to provide training to ARTC personnel for installation of the barrier.
4. Further supply of this system must come with a training package as part of supply.
5. To only erect, maintain and remove the Safetrax system under appropriate Work on Track methods of working applicable to the area and based on an individual assessment of each location it is being installed.
6. Ensure within planning process for any works, the use of the Safetrax system is only included if there are as far as is reasonably practicable, no other means of undertaking the works outside live operational times.
7. Include within the Daily Pre Work Briefs a section regarding fencing for clear understanding of the purpose and functionality of the Safetrax system.
8. Rail Clamp must not be in contact with a Glued Insulated Joint when attached to the rail. Field observations must be taken into account when using in the vicinity of Glued Insulated Joints.

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| 14 | Does the Originator accept the additional Conditions of Approval as set by the Review Panel: | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
|----|---|-----|-------------------------------------|----|--------------------------|-----|--------------------------|

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|----------------------|-----------------|-----------------------------|
| 15 | Sign off | <i>ARTC office use only</i> |
| Review Panel: | | |
| John Furness | <u>On file</u> | Date: <u>1/08/2014</u> |
| John Lord | <u>On file</u> | Date: <u>1/08/2014</u> |
| Greg Watson | <u>On file</u> | Date: <u>1/08/2014</u> |
| Denis Snowden | <u>On file</u> | Date: <u>1/08/2014</u> |
| Jess Tai | <u>On file</u> | Date: <u>1/08/2014</u> |

Approval (for trial at Maitland):

Operations Safety & Environment Review Group

11 August 2014

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|----------------------|---|-----------------------------|
| 16 | Sign off for updates to extend to network wide applicability | <i>ARTC office use only</i> |
| Review Panel: | | |
| John Furness | <u>On file</u> | Date: <u>21/04/2015</u> |
| John Lord | <u>On file</u> | Date: <u>17/04/2015</u> |
| Greg Watson | <u>On file</u> | Date: <u>23/04/2015</u> |
| Denis Snowden | <u>On file</u> | Date: <u>27/04/2015</u> |
| Jess Tai | <u>On file</u> | Date: <u>21/04/2015</u> |